CLAIMS

WE CLAIM:

1   1.   A method of reducing the rate of growth of tumor
2 cells *in vivo* in a mammalian subject, the tumor cells
3 comprising an IL13-specific receptor, comprising the step of
4 delivering into the subject a molecule having an IL13-moiety
5 and a cytotoxic moiety in an amount effective to reduce the
6 rate of growth of tumor cells.

1   2.   The method of claim 1, wherein the tumor cells are
2 glioblastoma multiforme cells.

1   3.   The method of claim 1, wherein the rate of tumor
2 growth is reduced by at least 25%.

1   4.   The method of claim 1, wherein the growth of the
2 tumor is inhibited.

1   5.   The method of claim 1, wherein the tumor volume is
2 reduced.

1   6.   The method of claim 1, wherein the molecule is
2 delivered by intratumoral injection.

1   7.   A method of detecting an IL13-specific receptor in a
2 tissue specimen comprising normal cells or tumor cells,
3 comprising the steps of:
4   (a)   contacting a portion of the specimen with a labeled
5 IL13 receptor-binding molecule under conditions suitable for
6 binding of the IL13 receptor-binding molecule to an IL13
7 receptor for a period of time sufficient to allow said
8 binding;

9   (b)   washing the specimen sample portion of step a under
10 conditions suitable for removing unbound IL13 receptor-
11 binding molecule; and
12   (c)   detecting the presence or absence of bound, labeled
13 IL13 receptor-binding molecule to the specimen portion of
14 step (b).

1   8.   The method of claim 7, wherein the specimen portion
2 of step a is preincubated in the presence or absence of IL4.

1   9.   A method of imaging tumor cells having IL13-specific
2 receptors in vivo in a mammalian subject comprising the steps
3 of:
4   (a)   delivering an imaging-effective amount of labeled
5 IL13 receptor-binding molecule into the subject; and
6   (b)   evaluating the distribution of the labeled IL13
7 receptor-binding molecule into the subject.

1   10.   A pharmaceutical composition for inhibiting in vivo
2 the growth of a tumor bearing an IL13-specific receptor com-
3 prising a molecule having an IL13 receptor-binding moiety and
4 a cytotoxic moiety in a pharmaceutically acceptable carrier.

1   11.   The pharmaceutical composition of claim 10, wherein
2 the molecule is a chimeric molecule comprising human IL13
3 receptor-binding moiety and a cytotoxic moiety selected from
4 the group consisting of PE3QQR, PE4E, and modified *Diptheria*
5 toxin.

1   12.   A kit for the *in vivo* or *in vitro* identification of
2 cells bearing IL13-specific receptors comprising a compound
3 comprising a portion of interleukin 13, the portion being
4 capable of binding to an IL13-specific receptor to a greater
5 extent than IL4 binds to the receptor.

1   13. An isolated polynucleotide fragment comprising a
2 coding region for an IL13-specific receptor.

add
D3